

REMARKS

By this amendment, claim 1 has been amended. Claims 9-16 have been withdrawn by the Examiner Accordingly, claims 1-8 are currently pending in the application, of which claims 1, 7 and 8 are independent claims. The Office Action indicates that claims 7 and 8 have been allowed, and claims 2-6 are allowable but objected to for being dependent form the rejected base claim.

Entry of the Amendments and Remarks is respectfully requested because entry of Amendment places the present application in condition for allowance, or in the alternative, better form for appeal. No new matters are believed to be added by these Amendments.

In view of the above amendments and the following Remarks, Applicants respectfully request reconsideration and timely withdrawal of the pending objections and rejections for the reasons discussed below.

Rejections Under 35 U.S.C. § 103

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U. S. Patent No. 6,573,339 issued to Liu, *et al.* (“Liu”) in view of U. S. Patent No. 6,473,149 issued to Melnik, *et al.* (“Melnik”). Applicants respectfully traverse this rejection for at least the following reasons.

The Examiner stated Lin shows “the pixel electrodes have apertures (See Figure 3) ...the common electrode have apertures (see Fig. 4). Although the Examiner has not clearly pointed out, it appears that the Examiner believes that the slits 302 and 303 in Fig. 3 correspond to the

claimed first aperture pattern and the slits 404, 405, 406 correspond to the claimed second aperture pattern. This assertion is respectfully disagreed.

In this response, claim 1 has been amended to further recite “a pixel region formed between the first substrate and the second substrate, wherein the first aperture pattern and the second aperture pattern divide the pixel region into a plurality of domains”. An example of this claimed feature is shown in Fig. 2 of the present application and its corresponding portion of the specification.

In this regard, Line shows, in Figs. 3 and 4, a pixel structure having both slits and bumps forms on the electrodes. The bumps 310 and 311 cover the slits 302 and 303, respectively, and the bumps 407, 408, 409 cover the slits 404, 405, 406, respectively. Liu describes “[t]he advantages of *forming slits on the pixel electrodes and forming bumps above the slits are*: shorting the rotating distance of liquid crystal molecules 314 directed by bumps, increasing the optical response speed and the gray level response speed of the LCD, and reducing the generation of the disclination lines” (column 4, lines 42-48). Thus, Liu necessitates both the slits and the bumps covering the slits in order to achieve these advantages.

Contrarily, in the claimed invention, the pixel region is divided into a plurality of domain *by the apertures formed on the both substrates*. As shown in Fig. 2, there are no bump that cover the apertures formed on the upper and lower substrates. Thus, the apertures of the claimed invention are *substantially different* from the slits of Liu. For this reason, it is submitted that Liu fails to disclose or suggest “a pixel region formed between the first substrate and the second substrate, wherein the *first aperture pattern and the second aperture pattern divide the pixel region into a plurality of domains*”.

Melnik is directed to forming a spacer material at a portion of the interpixel region to eliminate the bend deformation in the interpixel region which causes the reverse tilt disclination in a pixel region (See Fig. 4). However, Melnik is absolutely silent as to apertures formed on the both substrates to divide a pixel region into polarity of domains. Since none of the cited references discloses or suggests the claimed apertures, the subject matter of claim 1 would not have been obvious from the asserted combination of Liu and Melnik.

Also, since there is no apertures in the transparent electrode 116 in Melnik, it is a logical leap that Melnik motivates to modify the structure of Liu such that the spacer of Melnik is formed at an end portion of the slits the slits 404, 405, 406 formed on the upper substrate of Liu.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of claim 1.

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Liu in view of U. S. Patent Publication No. 2004/0046915 A1 to Takeda, *et al.* (“Takeda”). Applicants respectfully traverse this rejection for at least the following reasons.

As previously mentioned, Liu is substantially different from the subject matter of claim 1 because Liu necessitates both the slits and the bumps covering the slits while, in the claimed invention, a pixel region is divided into a plurality of domains by the apertures formed at the both substrates.

Tanaka shows, in Fig. 54, the low dielectric constant portion 338a formed between the high dielectric constant portions 338bs and the slits 319 formed on the pixel electrode 319, but fails to disclose or suggest apertures formed on both the common electrode 334 and the pixel

electrode 319 to divide the pixel region into plurality of domains. Particularly, there is no aperture in the common electrode 334 and no spacer is formed between the substrates 311 and 331. Thus, it is a logical leap that Tanaka suggest to modify the structure of Liu such that a spacer is formed at an end portion of the aperture formed on the common electrode.

For these reasons, it is submitted that claim 1 is patentable over Liu and Tanaka. Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of claim 1.

Other Matters

In addition to the amendment mentioned above, claim 1 has been further amended for clarification and better wording and to eliminate certain limitations that appear to be irrelevant to the patentability of claim 1.

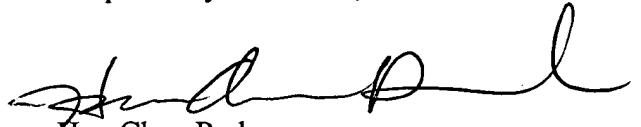
CONCLUSION

Applicants believe that a full and complete response has been made to the pending Office Action and respectfully submits that all of the stated objections and grounds for rejection have been overcome or rendered moot. Accordingly, Applicants respectfully submit that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicants' undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,



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